

WHAT IS CLAIMED IS:

1. A steering angle correction device in a vehicle steering apparatus in which the action of a steering actuator controlled in accordance with the steering angle from the center point position of a steering member is transmitted to the vehicle wheels so that the vehicle steering angle varies,  
5 said steering angle correction device comprising:

an absolute position detection sensor which outputs an analog signal with a value corresponding to the absolute position of the steering member;

10 a position sensor which outputs a steering angle detection signal corresponding to the variation in the steering angle of the steering member, and which outputs a position specifying signal when the steering member is in a predetermined specified position;

15 a steering direction determining part which determines the steering direction of the steering member;

20 a steering initiation position determining part which determines the steering initiation position, which is the absolute position of the steering member corresponding to the output value of the absolute position detection sensor at the time of initiation of control action, on the basis of a stored correspondence relationship between the absolute position of the steering member and the output value of the absolute position detection sensor;

25 a reference position determining part which determines the reference position by correcting the steering initiation position by an amount corresponding to the reference error determined and stored in the preceding control action;

a current position determining part which determines the current position of the steering member from the reference position, the steering angle detection signal, the steering direction of the steering member, and a stored correspondence relationship between the steering angle detection  
5 signal and the variation in the steering angle of the steering member;

an error determining part which determines the deviation between the current position of the steering member at the time when the position specifying signal is generated and the generation position of the position specifying signal as the error in the current control action;

10 a corrected position determining part which determines the corrected position of the steering member by correcting the current position by an amount corresponding to the error in the current control action; and

a reference error for the next control action determining and storing part which determines and stores the reference error for the next  
15 control action by adding the error in the current control action to the cumulative value of the errors in the control actions up to the preceding control action;

wherein the steering actuator is controlled in accordance with the corrected position of the steering member as the steering angle from the  
20 center point position of the steering member.

2. The steering angle correction device according to claim 1, wherein the reference error determined in the preceding control action is used as the value corresponding to the cumulative value of the errors in the control  
25 actions up to the preceding control action.

3. The steering angle correction device according to claim 1, further comprising:

a reference error storing part which stores the reference errors in  
5 a plurality of immediately preceding control actions; and

an arithmetical mean value determining part which determines the arithmetical mean value of the stored reference errors in the plurality of control actions;

wherein said arithmetical mean value is used as the value  
10 corresponding to the cumulative value of the errors in the control actions up to the preceding control action.

4. The steering angle correction device according to claim 1, comprising:

15 an output value storing part which stores the output value of the absolute position detection sensor at the time of initiation of control action;

wherein the reference error for the next control action is stored with related to the output value of the absolute position detection sensor at the time of initiation of control action, and said reference position is  
20 determined by correcting the steering initiation position by an amount corresponding to the reference error stored with related to the output value of the absolute position detection sensor at the time of initiation of control action.